December 18, 2020

Attention: Michael MacPherson
Clerk of the Committee Standing Committee on Industry,
Science and Technology
Sixth Floor, 131 Queen Street
House of Commons
Ottawa ON, K1A 0A6

Delivered via email: indu@parl.gc.ca

Dear Mr. MacPherson:

Re: Accessibility and Affordability of Telecommunications Services

Shaw Communications Inc. (**Shaw**) appreciates the opportunity to submit this brief to the House of Commons Standing Committee on Industry, Science and Technology, as part of its *Study on the Accessibility and Affordability of Telecommunications Services*.

Shaw is a leading Canadian connectivity company. We are committed to delivering affordable access to high-quality wireline and wireless services across our footprint, in both large cities and rural and remote communities. Shaw's Wireline division consists of Consumer and Business services offering broadband Internet, Shaw Go WiFi, video and digital phone services across British Columbia, Alberta, Saskatchewan, Manitoba, and Northern Ontario. The Wireless division provides wireless voice and LTE data services through an expanding and improving mobile wireless network infrastructure across British Columbia, Alberta, and Ontario.

Sincerely,

Dean Shaikh
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SUBMISSION OF SHAW COMMUNICATIONS INC.
TO THE HOUSE OF COMMONS STANDING COMMITTEE ON INDUSTRY, SCIENCE AND TECHNOLOGY

Study on the Accessibility and Affordability of Telecommunications Services

Introduction

1. Canada's success in fostering the development of world-class telecommunications networks is the result of a policy framework that has allowed facilities-based competition to thrive among the companies that own, operate, and build Canada's broadband and mobile networks (the **Network Builders**). This regulatory approach has supported billions of dollars in annual investments in ever-improving and expanding wireline and wireless connectivity across Canada. In the wireline market, the competitive rivalry between cable carriers like Shaw and telephone companies (also known as Incumbent Local Exchange Carriers (**ILECs**)), is the reason that 87.4% of Canadians enjoy access to high-quality broadband internet[1] and Canada consistently ranks among the top three countries in terms of internet affordability.[2] In the wireless market, 96% of Canadians have access to high-speed LTE-Advanced service,[3] and regional facilities-based competitors – Shaw, Videotron, and Eastlink – are rapidly disrupting the dominance of the Big 3 – Rogers, Bell, and Telus – and driving unprecedented levels of affordability and choice for consumers.

2. Unfortunately, certain parties have urged Canada's policy-makers to move away from supporting facilities-based investment and competition – "typically regarded as the ideal and most sustainable form of competition"[4] – towards a reliance on regressive regulatory approaches that are causing competitive distortions in the market, diminishing consumer choice, and reducing levels of investment particularly in rural, remote and Indigenous communities. Allowing these harmful dynamics to persist will come at the cost of the Government's new and highly ambitious target of connecting 98% of Canadian households by 2026[5] – an objective that Shaw strongly supports – and an inclusive economic recovery.

3. As stated by Minister Bains: "Canada's future depends on connectivity. Our government recognizes that access to affordable, high-quality high-speed Internet is a necessity for all Canadians, no matter where they live."[6] Providing all Canadians with affordable and accessible services depends on a stable and predictable regulatory regime that reduces barriers to sustainable competition, while supporting – and promoting – massive, long-term investment in infrastructure.

4. This is an immensely important moment in Canada's connectivity development. We face the dual challenges of overcoming the COVID-19 economic recession – which has amplified the

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[1] CRTC Communications Monitoring Report (2020), online: https://crtc.gc.ca/pubs/cmr2020-en.pdf [**CMR 2020**], p.105. This percentage refers to the percentage of Canadians with access to broadband internet that is meeting or exceeding the CRTC's Universal Service Objective (50 Mbps download/10 Mbps upload).
[2] The Economist Intelligence Unit, The Inclusive Internet Index 2020. Available: https://theinclusiveinternet.eiu.com/explore/countries/CA/performance/indicators/affordability
[3] CMR 2020, p.19.
[4] Telecom Regulatory Policy CRTC 2015-326, para. 5.
[5] Fall Economic Statement 2020: Supporting Canadians and Fighting COVID-19, online: https://www.budget.gc.ca/fes-eea/2020/report-rapport/toc-tdm-en.html [**Fall Economic Statement 2020**], p.81.
[6] ISED Statement, "Response by the Government of Canada to petitions concerning CRTC wholesale Internet rates" (15 Aug 2020), online: https://www.canada.ca/en/innovation-science-economic-development/news/2020/08/response-by-the-government-of-canada-to-petitions-concerning-crtc-wholesale-internet-rates.html.

need to bridge the digital divide – at the same time as Canada's Network Builders are beginning to deploy 5G networks. This Committee can put Canada on a path for success by making recommendations that will support the strength and reach of Canada's digital infrastructure. Shaw submits that this includes:

(i) Reaffirming the regulatory framework's need to support and provide the strongest incentives for facilities-based investment;
(ii) Amending the *Telecommunications Act* to confirm the CRTC's jurisdiction over passive infrastructure; and,
(iii) Maintaining ISED's pro-competitive policy of spectrum set-asides for regional facilities-based competitors.

Shaw's Demonstrated Achievements in Advancing Accessibility and Affordability

5. As the largest cable-based internet service provider in Western Canada, Shaw plays a leading role in advancing connectivity in Canada. Shaw's Fibre+ wireline network delivers broadband internet, video, WiFi, and digital phone services across British Columbia, Alberta, Saskatchewan, Manitoba, and northern Ontario.

6. Over the past 8 years, Shaw has invested more than $25 billion to build and continuously upgrade, enhance, and expand Shaw's Fibre+ network. Today, Shaw's Fibre+ network is one of the most advanced in North America, offering the fastest broadly available download speeds of any operator in Western Canada and the fastest broadly available upload speeds of any North American cable operator. Almost every neighbourhood that Shaw serves is connected to our extensive Fibre+ network, meaning that our customers in rural and remote areas have access to the same quality of connectivity and speeds (for the same prices) as Shaw's customers in Calgary or Vancouver.

7. Shaw's investments have allowed us to constantly enhance the speed, scalability, reliability, flexibility, and capacity of our network, and in turn, increase choice, value, and affordability for Western Canadians. For instance, in 2018, after the activation of DOCSIS 3.1, Shaw doubled our internet speeds without any increase in prices – all new and existing Internet 150 customers were upgraded to 300 Mbps, and all new and existing Internet 300 customers received 600 Mbps, at no additional cost.[7] During the COVID-19 pandemic, Shaw seamlessly activated additional capacity in order to keep our customers connected and maintain an exceptional broadband experience, despite an increase of approximately 50% in wireline network usage.

8. In May 2020, Shaw launched our Fibre+ 1 Gig residential internet service speed (downloads of up to 1 Gbps) to 99% of Shaw's residential customers, in both small towns and big cities. This means that our Fibre+ 1 Gig speed is available in over 200 communities with populations of fewer than 10,000 – 176 of which are below a population of 5,000. Only four months after Shaw's launch of Fibre+ 1 Gig, we launched our Fibre+ 1.5 Gig residential service (up to 1.5

[7] Notably, when Shaw doubled its Internet speed offerings, Canada instantly climbed 9 places in the Ookla Speedtest Global Index, from 16th to 7th place in the world. See: McKetta, I, "*Canadian ISP Doubles Speeds, Canada Jumps 9 Places in World Ranking",* (23 Jan 2019), www.speedtest.net/insights/blog/canadian-isp-doubles-speeds.

Gbps download speeds) in November 2020, which we are rolling out across our footprint. As stated by Shaw's President, Paul McAleese:

> The best connectivity experiences should not be just restricted to people living in large urban centres. Shaw's Fibre+ Gig is a huge win for millions of people across Western Canada who have never before had access to these speeds.[8]

9. Shaw offers a range of plans to meet customers' speed and data requirements, starting with our Fibre+ 10 service (10Mbps/1Mbps). Shaw is also committed to supporting internet access for low-income households as a voluntary participant in ISED's "Connecting Families" initiative. Through this program, tens of thousands of families receive Shaw internet services for $10/month.

10. Our Shaw Go WiFi network is another example of how Shaw's innovation and facilities-based investment is increasing connectivity, value, and affordability for Canadians. The Shaw Go WiFi network is Canada's largest WiFi network, with more than 117,000 access points in over 100 communities from British Columbia to Ontario. Access to Shaw Go WiFi is complimentary for Shaw internet and wireless customers and also available to non-Shaw customers at no cost at tens of thousands of locations, including municipal buildings, parks, recreation facilities, and transit stations.

11. Shaw is focused on increasing connectivity for all Canadians, including through partnerships with the Federal and provincial governments, as well as with other parties (such as All Nations Trust Company). Since 2018, Shaw has received approval to complete six broadband infrastructure projects through Connect to Innovate and B.C.'s provincial funding programs, including two fibre transport projects that are currently underway[9] between Whistler to Cache Creek, and Prince George to Dawson Creek. These projects will provide the backbone that is a prerequisite to connecting 18 Indigenous communities with high-speed internet access.

12. In the wireless market, Shaw provides voice and LTE-Advanced data services in both large urban centres and small communities through: Freedom Mobile, which operates in British Columbia, Alberta, and Ontario; and Shaw Mobile, launched in July 2020, which operates in British Columbia and Alberta. Despite facing numerous ongoing barriers to competition and investment, Shaw has disrupted the dynamics of Canada's wireless market, leading to lower prices; a reduction in punitive data overage charges; and increased choice.

13. Since entering the wireless market in 2016 through the acquisition of WIND for $1.6 billion, Shaw has invested almost $3 billion to rapidly improve and expand our wireless network, including replacing all of our radio equipment; acquiring hundreds of millions of dollars in critical spectrum;[10] and deploying this spectrum at an accelerated pace across an ever-expanding footprint. In only four short years, Shaw has launched in 25 new markets and

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[8] Shaw Communications Newsroom, "Shaw Launches Fibre+ Gig 1.5 — Offering Faster Speeds and More Bandwidth from Western Canada's Leader in Gig Speed Internet" (5 Nov 2020), online: https://newsroom.shaw.ca/corporate/newsroom/article/materialDetail.aspx?MaterialID=6442452438.

[9] Shaw has committed $15.9 million to those projects.

[10] Shaw acquired 700 MHz and 2500 MHz spectrum licences from Quebecor Media Inc. for $430 million in 2017 and 600 MHz spectrum licences in ISED's spectrum auction for $492 million in 2019.

transitioned from a 3G network to an LTE-Advanced network that currently covers 19 million people, or 50% of the Canadian population.

14. Shaw's ambitious investments to increase the performance and reach of our wireless network enabled Freedom's launch of the Big Gig data plans in October 2017, which offered Canadians something entirely new: 10GB for $50, and no overage fees. Prior to Freedom's Big Gig plans, no wireless provider in Canada offered 10GB of data for less than $100. This triggered a competitive response from the Big 3: during the December 2017 holiday promotional period, the Big 3 launched 10GB data plans for $60, but only in the markets served by Freedom.[11] By 2019, thanks to the sustained competitive pressure exerted by Freedom and the other regional competitors, affordable unlimited data plans became a permanent feature of the market. The CRTC's latest industry data demonstrates the clear trend of lower prices and increased data, corresponding to Freedom's entry in 2016, particularly since the Big Gig launch in 2017.

Clear Evidence of Pro-Competitive Benefits that Regional Facilities-based Competitors Are Driving for Consumers	
Monthly data plan prices have decreased	- Between 2016-2019, monthly prices for all service tiers decreased:[12] o Plans with no data decreased by $11.48/month (from $31.44 in 2016 to $19.96 in 2019) o 1GB plans decreased by $19.85/month (from $48.88 in 2016 to $29.03 in 2019) o 2GB data plans decreased by $21.85/month (from $61.71 in 2016 to $39.86 in 2019) o 5GB data plans decreased by $28.65/month (from $77.47 in 2016 to $48.82 in 2019) - Between 2018-2019, monthly prices for mobile services decreased by an average of 13.8%.[13]
Data overage fees are falling	- Data overage charges as total mobile retail revenues declined by 50%, from 6% in 2016, to 3% in 2019.[14] This corresponds to a reduction in overage fees from $1.39B in 2016 to $840M in 2019.[15]
Subscribers are receiving more data	- The percentage of subscribers with plans of at least 5GB of data increased from 31.5% in 2017, to 56.5% in 2019.[16]

15. In addition to our transformative Big Gig plans, Freedom is driving affordability, choice, and value through:

- A selection of innovative, low-cost plans, with prepaid options that include unlimited talk and text for only $99/year, and unlimited talk and text and 1.5GB for $19/month; and, postpaid plans such as unlimited text, 100 minutes of nationwide calling, and 250 Mb for $15/month and unlimited talk and text with 4 GB of data for $35/month.

[11] "Big Three launch $60, 10 GB plans in Freedom territory." The Wire Report 15 Dec 2017, https://thewirereport.ca/2017/12/15/big-three-launch-60-10-gb-plans-in-freedom-territory/.
[12] CMR 2020, p.143, Figure 5.10.
[13] CMR 2020, p.143.
[14] CMR 2020, Open Data, Data-retail-mobile-sector, MB-S2, Supplementary Table 2.
[15] CMR 2020, Open Data, Data-retail-mobile-sector, MB-F1, Figure 1.
[16] CMR 2020, Open Data, Data-retail-mobile-sector, MB-16, Infographic 6.

- Highly attractive device discounts and subsidy options, allowing Canadians to access premium devices at more affordable prices. For example, with our Absolute Zero offer, customers that sign-up for a two-year Big Gig plan receive a premium smartphone for $0 in upfront charges, $0 in additional monthly charges, and $0 to own the device at the end of the two-year commitment.
- No overage fees on any Freedom Mobile plan, regardless of data allowance.

16. In July 2020, Shaw disrupted the wireless market once again with our launch of Shaw Mobile. Shaw Mobile allows Shaw's Fibre+ internet customers to bundle their mobile service for unprecedented savings, enhancing the affordability of both internet and wireless services. Shaw's Fibre+ internet customers can get up to 6 phones with unlimited talk/text for $0/month and, if they need LTE data, can chose either: our prepaid "By The Gig" plan, which offers data for $10 per GB; or our postpaid "Unlimited" plan, which offers 25GB for $45/month, for Fibre+ 1 Gig customers, or 25GB for $25/month. These are compelling offers that are bringing incredible value to our customers in B.C. and Alberta. Shaw Mobile is another powerful example of facilities-based competition and innovation delivering true affordability for Canadians.

17. Critically, Shaw would never have been able to launch Freedom's Big Gig plans or our innovative Shaw Mobile offering had we entered the wireless market as a mobile virtual network operator (**MVNO**). Our ability to maximize data and affordability in order to have a truly disruptive impact on competition was only possible because we could leverage the full capacity of Shaw's wireless, WiFi, and Fibre+ networks. Since 2016, Shaw's wireless subscriber base has grown by approximately 80% to over 1.8 million subscribers, which is a true testament of the value that Shaw's mobile services are delivering to Canadians.

Recommendations to Promote the Accessibility and Affordability of High-Quality Connectivity for All Canadians

18. As noted by Minister Freeland, our country is facing "our most severe economic shock since the Great Depression, and our most severe public health crisis since the Spanish Flu."[17] Although many sectors are facing incredible uncertainty, investment by Canada's telecommunications industry will drive our economic recovery – an opportunity to embrace and maximize. As explained by the Government's Advisory Council on Economic Growth:

> Infrastructure investment is among the most powerful and scalable levers of economic growth, with both a long and short term impact. Over the longer term, infrastructure drives economic productivity year after year to the tune of 20 to 50 cents on every original dollar invested. […] Productive infrastructure thus translates into competitiveness for the many industries that depend on it. […] For every dollar invested, it is estimated that the economy grows by a dollar and sixty cents (1.6 times multiplier) in the first year. Jobs are created in each phase of project delivery. For every million dollars invested, approximately 15 jobs are created. Skilled and semi-skilled construction workers are hired, cement and steel manufacturers fill orders, architecture and engineering firms are in demand – all of these, and many more, spend money in the economy.[18]

[17] Department of Finance Canada, Speech "Supporting Canadians and Fighting COVID-19", (30 Nov 2020), online: https://www.canada.ca/en/department-finance/news/2020/11/supporting-canadians-and-fighting-covid-19.html

[18] Advisory Council on Economic Growth, "Unleashing Productivity Through Infrastructure", online: https://www.budget.gc.ca/aceg-ccce/pdf/infrastructure-eng.pdf, p.4-5.

19. Shaw is eager to continue making the investments that will: advance wireless and wireline connectivity; maximize Canadians' participation and competitiveness in the digital economy; support a competitive 5G environment; create jobs; and, stimulate the economy.[19] This can only occur with public policy that supports and recognizes the fundamental importance of long-term capital investment and facilities-based competition.

Recommendation 1: Confirm the Importance of the Regulatory Framework's Support for Facilities-Based Investment and Competition

20. The pandemic has demonstrated that Canada's digital infrastructure is vital to our social, physical, and economic well-being, and that investment in Canada's digital infrastructure must be supported and promoted by policy-makers, not taken for granted, or undermined by short-term policy objectives. As recently noted by the CRTC Chair Ian Scott, "[w]hile meeting [the Universal Service Objective] has been a priority for some time, the profound economic and social upheaval caused by the COVID-19 pandemic has reinforced the need for broadband in communities that are underserved."[20]

21. Shaw strongly agrees with the need for a renewed focus on supporting investment in Canada's networks. Respectfully, however, it is the enduring uncertainty under the CRTC's wholesale wireline and wireless frameworks that risks undermining the attainment of the Universal Service Objective and threatens the future of sustainable competition and investment. Most significantly, in February 2019, as part of its Mobile Wireless Review, the CRTC released its "preliminary view" that it would be appropriate to mandate the Big 3 to provide MVNO access.[21] Subsequently, in August 2019, the CRTC dramatically lowered the rates that Network Builders like Shaw can charge resellers for wholesale high-speed access to their broadband networks.[22] Almost two years later, a decision in the Mobile Wireless Review is pending, and the wholesale wireline rates are under review by the CRTC.

22. The ongoing risk of a broad MVNO mandate and drastically low, below-cost wholesale rates has undermined consumer choice, reduced network investments, and deterred competitive entry. As explained by our CEO, Brad Shaw, in October 2019:

> Since the announcements on the wireless MVNO hearings and the reduced TPIA rates, we have already altered our plans with respect to launching new, higher speed Internet tiers and additional wireless expansion beyond our current footprint. Throughout the regulatory process, we are hopeful that the government recognizes the critical role that facilities-based companies play in the ability to usher in new technologies and deliver better and faster services for Canadians.[23]

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[19] Shaw notes that a recent report published by the CWTA demonstrated that in 2019: (i) Facilities-based providers supported 638,000 Canadian jobs and directly contributed $74.5B to GDP, broken down into $23.5B in direct impact from the value chain of service providers and $51B in direct impact due to other industries increasing sales/output by adding incremental wireless and wireline connections; and, (ii) Every telecommunications job results in 2.3 jobs supported in the Canadian economy, and every $1M in telecommunications sales results in 4.2 new jobs supported in the Canadian economy. Online: https://www.cwta.ca/wp-content/uploads/2020/12/EN_Investing_in_Canadas_Digital_Infrastructure.pdf

[20] Standing Committee on Industry Science and Technology, Evidence (26 Nov 2020), at 1110, Mr. Ian Scott (Chairperson and Chief Executive Officer, CRTC), online: https://www.ourcommons.ca/DocumentViewer/en/43-2/INDU/meeting-7/evidence.

[21] Telecom Notice of Consultation CRTC 2019-57.

[22] Telecom Order CRTC 2019-288. For a background and summary regarding the wholesale wireline regime and impact of Telecom Order 2019-288, see: Shaw Submission to INDU Committee re Response to COVID-19 (July 2020), at p.6-10.

[23] Shaw Communications Inc. Q4 2019 Results – Earnings Call, online: https://seekingalpha.com/article/4299198-shaw-communications-inc-sjr-ceo-brad-shaw-q4-2019-results-earnings-call-transcript?part=single.

23. Shaw has demonstrated our ability to execute on our wireless strategy as a strong regional competitor. However, to continue delivering affordability and choice, Shaw must make further long-term investments (including to acquire critical 5G spectrum), which is only possible if there is a reasonable prospect of return. The overwhelming evidence adduced during the Mobile Wireless Review demonstrated that a broad MVNO regime will profoundly and disproportionately harm the only proven source of effective and sustainable competition against the Big 3: facilities-based regional competitors.

24. Following the Commission's MVNO announcement, Shaw was forced to change our plans in ISED's 600 MHz spectrum, including pulling back on our ambitions to expand into new markets. If the Commission introduces a broad MVNO regime, Shaw will be forced to reconsider whether we can continue investing in our wireless network.

25. With respect to the CRTC's August 2019 wholesale rate decision, significant corrections to the rates are necessary to enable Network Builders to fully recover costs and earn a reasonable rate of return to support further investment. If below-cost rates come into effect, the consequence will be the immediate and dramatic reduction in Network Builders' investments in Canada's digital infrastructure, with disproportionate impacts in rural, remote, and Indigenous communities.

26. Shaw submits that the Government's new, ambitious target of connecting 98% of Canadians by 2026 is only achievable with a stable regulatory framework that supports long-term capital investment. The Government cannot afford to displace private sector investment, particularly given the current fiscal challenges facing the federal balance sheet. As explained in a 2019 report by BGC's Centre for Canada's Future:

> Private investment in digital infrastructure in Canada is well over $10B per year, an order of magnitude greater than public investment in digital infrastructure programs. … [A] 25% drop in wireless prices and low mandated wireline wholesale rates could lead to a $2B+ annual CapEx gap. A gap of this magnitude is unlikely to be filled by Canada's governments, and would have significant effects on the speed and geographic coverage of 5G and fibre networks. Global examples show that even if the government supplies some additional public funding, that effort is unlikely to be as efficient in building infrastructure as private investors.[24]

27. We remain hopeful that the CRTC will definitively reject broad MVNO and significantly vary the wholesale rates set in August 2019. In doing so, the CRTC will discharge its duty as an independent administrative tribunal responsible for ensuring Canadians' access to the best possible telecommunications networks and services. Consistent with this mandate, Shaw urges this Committee to include in its final report, a recommendation that Canada's telecommunications policy framework must prioritize – and maintain the strongest possible incentives for – facilities-based investment and competition.

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[24] BCG Centre for Canada's Future, "In the Balance: Future-proofing Canada's digital infrastructure to unlock benefits for all" (Dec 2019), pg. 18, online: https://media-publications.bcg.com/flash/dotbcg_other/CCF%20Digital%20Infrastructure-%20In%20the%20Balance.pdf.

Recommendation 2: Confirm the CRTC's Jurisdiction over Passive Infrastructure

28. Modernizing Canada's regime governing passive infrastructure access[25] is critical to supporting rural and remote connectivity and the timely roll-out of 5G. The CRTC has recognized that "untimely and costly access to support structures is one of the most significant barriers to the deployment of broadband-capable networks in rural and remote regions of Canada"[26] and has initiated a proceeding to improve access to telephone poles (owned by the ILECs) or other poles to which the ILECs control access by other carriers. However, the CRTC's proceeding will not improve access to passive infrastructure owned by other types of entities, because the CRTC's authority under s.43 of the *Telecommunications Act* does not extend to property owned by provincially-regulated electrical utilities. There is also uncertainty regarding the CRTC's jurisdiction over passive infrastructure owned by municipalities and other public authorities.

29. This Committee can materially support the speed and efficiency of rural deployment by amending the *Telecommunications Act* to confirm the CRTC's jurisdiction over passive infrastructure access and adopting recommendations #36-38 set out in the BLTR Panel's final report.[27] Broadening the Commission's authority over passive infrastructure will allow Canada to join other jurisdictions that have already targeted access as a critical priority to accelerate deployment and have created efficient, streamlined access regimes.

Recommendation 3: Increase regional competitors' access to spectrum, through pro-competitive, set-aside policies

30. Spectrum set-asides are critical to driving the affordability and accessibility of wireless services in Canada, including in rural and remote areas, by targeting the concentration of spectrum among the Big 3 and promoting sustainable facilities-based competition.

31. Despite Shaw's remarkable pro-consumer achievements since entering the wireless market, we remain at a competitive disadvantage with the Big 3, who continue to hold more than 75% of spectrum in Canada.[28] No matter how much Shaw invests in our wireless infrastructure, it will be impossible to match the Big 3's network performance – and thus continue to drive sustainable competition – without access to sufficient spectrum.

32. Insufficient spectrum is an absolute barrier to competition, which is foreclosing growth, investment, and expansion by regional facilities-based competitors like Shaw. The Big 3 are economically incented to foreclose new competitors, and without spectrum set-asides, they are more than capable of acting on these incentives to exclude competitors like Shaw from the market. As explained by Dr. Peter Cramton, a globally recognized economist and expert in spectrum auction and market design:

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[25] To deploy wireline and wireless networks, Network Builders require access to passive infrastructure, which includes support structures (like conduits, poles, and towers); streetlights; transit shelters; and rooftops of residential and commercial multi-dwelling unit buildings, and are owned by different types of entities like ILECs, provincial energy utilities, municipalities and private property owners.

[26] Telecom Notice of Consultation CRTC 2020-366.

[27] "Canada's communications future: Time to act," (29 Jan 2020), Recommendations 36-38, https://www.ic.gc.ca/eic/site/110.nsf/eng/00012.html#Toc26977836.

[28] Bell and Telus are particularly advantaged because of their spectrum-sharing arrangement, which enables them to effectively double their respective holdings.

> …Where set-asides are most effective is in instances, like in Canada, where there is a clear foreclosure risk. In spectrum auctions, the foreclosure risk refers to the likelihood that dominant incumbents, such as the Big 3, will be driven to pay a premium for spectrum to confine viable competitors to a poor spectrum position to keep otherwise strong competitors out of the market. The foreclosure occurs not because the small carrier fails to bring value to consumers, but because the dominant incumbents benefit from foreclosing competition.[29]

33. This foreclosure risk is heightened as we approach the era of 5G. Building a 5G-capable network requires a substantial amount of diverse spectrum holdings. Thanks to the Big 3's spectrum advantage, they have already completed early 5G network deployments. If Shaw is unable to acquire sufficient spectrum in ISED's upcoming 3500 MHz and C-band auctions – which are critical building blocks for 5G – Shaw's ability to compete in the 5G environment will be severely compromised. Failure to create the conditions for a competitive 5G deployment will allow the Big 3 to completely undo the progress made by Shaw and the other regional competitors in recent years, undermining affordability and access in the next era of wireless services and beyond.

34. The Big 3 have advanced numerous baseless claims in their campaigns against set-asides. This is no surprise. Freedom's entry has shifted the market dynamics, causing the Big 3 to drastically reduce overage fees and offer significantly more data for much lower prices. However, the Big 3's anti-set-aside arguments must be taken for what they are: a transparent and desperate attempt to thwart further competitive entry and expansion by regional competitors like Shaw, in order to maintain and further entrench their joint dominance in the 5G era.

35. Perhaps the most pernicious among the Big 3's anti-set-aside arguments are the claims that they reduce rural and remote connectivity or increase wireless prices for consumers. The Big 3 frequently use the 600 MHz auction as an example, despite clear evidence that the prices paid by the Big 3 were determined entirely by the other incumbents and ISED rather than the set-aside eligible bidders.[30] Moreover, as explained by Dr. Cramton, supporting the competitive entry by regional disruptors like Freedom is the key to driving down wireless prices for consumers:

> It is well understood in economics, and in mobile communications in particular, that competition determines prices, not spectrum auction prices (Kwerel and Strack 2001). To the extent set-asides are successful in increasing competition by promoting the entry and success of small carriers, they lead to lower prices. There is ample empirical evidence in many countries, including the U.S. and Canada, that competition lowers retail prices and that small carriers are especially effective in this dynamic (for example Chipty 2019). Recent data from the CRTC show that mobile prices have steadily declined across all market segments since Shaw entered the market in 2016 (CRTC 2020).

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[29] Attached, as Appendix A to Shaw's Submission, Dr. Peter Cramton, "Pro-competitive Measures Remain Essential in Canadian 5G Spectrum Auctions" (16 December 2020), report prepared for Shaw Communications Inc. [**Cramton Report**], p.2.

[30] Shaw, Reply Comments in SLPB-002-19, *Consultation on a Policy and Licensing Framework for Spectrum in the 3500 MHz Band*, dated September 20, 2020, paras. 57-64; see also, Economists Incorporated, *An Analysis of Allocation Phase Pricing and Lock Round Price Increases in the Canadian 600 MHz Auction*, 20 Sep 2019. <https://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/SLPB-002-19-Reply-Shaw-Economists-Attachment2.pdf/$FILE/SLPB-002-19-Reply-Shaw-Economists-Attachment2.pdf>

This is precisely why the Big 3 are so insistent on this issue. The Big 3 are harmed by the strong competition from regional carriers.[31]

36. The Big 3's anti-set-asides arguments also ignore the importance of promoting competition in all parts of the country, not just in big cities. Pro-competitive set-aside policies have been crucial to Shaw's expansion into rural and remote areas. For example, Shaw's AWS-1 band spectrum was acquired through a set-aside in ISED's 2008 auction,[32] and was critical to Shaw's launch in 20 new and rural and remote communities in 2019. Thanks to ISED's AWS-1 set-aside, Shaw is able to offer these communities the benefits of a strong alternative to the Big 3, including choice of differentiated, affordable, innovative, wireless offerings.

37. Unsurprisingly, the Big 3's claims and mischaracterizations of set-asides also completely ignore the fact that they each received highly valuable low-frequency spectrum – which is essential for network builds in less densely populated areas – for free, and at the beginning of their network deployment (optimum timing for network planning purposes). In marked contrast, Shaw (and other regional competitors) have not benefited from any handouts and have spent billions of dollars to build our networks from the ground up. We are only now getting access to sufficient low-frequency spectrum, after acquiring all spectrum at great cost through contested auctions and strategic acquisitions.

38. Shaw entered wireless only four years ago and we are methodically deploying our spectrum holdings at an accelerated pace in order to increase the breadth and quality of our network. However, we require more spectrum in order to compete. The fact that Shaw is thoughtfully executing on a wireless strategy that is increasing consumer welfare and eliciting competitive responses from the Big 3 supports the basis for set-asides. Spectrum set-asides are fair, efficient, pro-competitive measures that are vital to increasing wireless affordability and innovation over the long-term by (i) preventing the foreclosure of competition by the Big 3; and (ii) supporting the deployment of competitive networks by new disruptors like Shaw, for the benefit of all Canadians, including those in smaller and rural communities outside our big cities.

Conclusion

39. This Committee can play a critical role in supporting Canada's success in the post-pandemic recovery and beyond, by adopting recommendations to:

- Strengthen the regulatory framework's support and incentives for facilities-based investment, innovation, and competition;
- Amend the *Telecommunications Act* to enable a modernized regime for access to passive infrastructure; and
- Continue implementing pro-competitive spectrum set-asides to promote sustainable wireless competition.

40. Shaw appreciates the opportunity to assist this Committee in its *Study on the Accessibility and Affordability of Telecommunications Services*.

[31] Cramton Report, p.2-3.
[32] See auction results at "Auction of Spectrum Licences for Advanced Wireless Services and Other Spectrum in the 2 GHz Range — Summary by Licence Block" (2008), online: http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf09003.html.

Pro-competitive Measures Remain Essential in Canadian 5G Spectrum Auctions

Peter Cramton[1]

18 December 2020

I have been asked by Shaw Communications Inc. to comment on the continued use of pro-competitive measures in spectrum auctions undertaken in Canada by the Department of Innovation, Science and Economic Development (ISED). This report supplements Shaw's brief to the House of Commons Standing Committee on Industry, Science and Technology, as part of its Study on the Accessibility and Affordability of Telecommunications Services, and provides a rebuttal to a recent op-ed that pro-competitive auction measures are no longer needed in Canada (Crandall 2020). As disclosed in the op-ed, Crandall is an advisor to Telus, and Crandall's arguments are familiar to me from the ISED filings and public statements of Telus and other Big 3 incumbent wireless providers in Canada against set-asides, which I will collectively refer to as "the Big 3 Position".

The Big 3 Position that set-asides represent misguided regulatory policy is premised on false assertions that mobile markets are fully competitive in Canada and that set-asides for small carriers penalize rural Canadians and raise prices. As shown below, each of these arguments is a myth.

On the contrary, Canada's spectrum policy has proven effective at developing competition in a country whose vast territory and low population density makes competitive entry challenging. Set-asides have been and continue to be critical to the advancement of long-term competition in Canadian wireless and are necessary to ensure competition in 5G. With competition, consumers enjoy lower prices and the benefits of more choice, while the overall economy benefits from heightened investment, including in more remote regions of Canada, and increased innovation. In the current context of Canada's wireless market, set-asides add significant economic value.

Myth 1: Set-asides are no longer needed

The Big 3 Position argues that Canadians are enjoying quality service at competitive prices, and therefore set-asides are no longer needed. This is a strange argument. One should not abandon a successful policy simply because it is working. Yes, the set-asides have increased competition and reduced prices for Canadians. Whether set-asides are desirable going forward hinges on whether the set-asides will strengthen the competition that is emerging. In the case of the upcoming 5G auctions, the answer is "yes", as I have argued previously (Cramton 2019).

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The Big 3 Position highlights the fact that, globally, set-asides have declined in use in recent years. This has occurred in countries where set-asides would be ineffective at strengthening competition. If the economics of entry are too challenging and a viable entrant does not appear, then set-asides are ineffective. Where set-asides are most effective is in instances, like in Canada, where there is a clear foreclosure risk. In spectrum auctions, the foreclosure risk refers to the likelihood that dominant incumbents, such as the Big 3, will be driven to pay a premium for spectrum to confine viable competitors to a poor spectrum position to keep otherwise strong competitors out of the market. The foreclosure occurs not because the small carrier fails to bring value to consumers, but because the dominant incumbents benefit from foreclosing competition.

Myth 2: Set-asides harm rural Canadians

There is such a compelling case that competition from small carriers improves prices and services where they operate that the Big 3 Position attempts to misappropriate the challenges of rural broadband access for its own ends. They allege that set-asides harm rural Canadians, who are not currently enjoying the benefits of competition from the small carriers. This argument fails on two grounds.

First, the rollout of networks occurs over years. Rationally, the most economic areas, urban centers, are built out first with rural areas coming later. Thus, it may take some time for competitive entry to occur in rural areas. Whereas the Big 3 have had decades to build out their networks, Shaw only entered the wireless market in 2016.

Second, and more importantly, limited service in rural areas has nothing to do with the availability of low- and mid-band spectrum to the Big 3. The main problem in rural areas is lack of *coverage*. Does a set-aside to small carriers preclude this? The answer is “no”. Consider a rural area that can only be served economically with low-band spectrum. Because the signal of low-band spectrum propagates further and more reliably around and through obstructions, cell towers can be spaced further apart, dramatically reducing the cost of providing service. Low-band spectrum is extremely scarce, but the set-aside does not destroy the spectrum. Carriers simply need to think of more creative ways to use this scarce resource. Sublicensing of underutilized spectrum is not only possible but often occurs.

Going forward, spectrum auctions should not be thought of as the final allocation of spectrum. Supply and demand imbalances are inevitable. Carriers should work to support a secondary market for spectrum, much like other commodity markets have spot markets to align real-time demand and supply. ISED is already seeking to develop the secondary market through deployment conditions that promote sublicensing (ISED 2019). Secondary markets address the Big 3’s concern much more effectively than spectrum auctions, which cannot solve supply and demand imbalances in real time.

Myth 3: Set-asides lead to higher retail prices and harm consumers

This is one of the more absurd claims in the Big 3 Position. It is well understood in economics, and in mobile communications in particular, that competition determines prices, not spectrum auction prices (Kwerel and Strack 2001). To the extent set-asides are successful in increasing competition by promoting the entry and success of small carriers, they lead to lower prices.

There is ample empirical evidence in many countries, including the U.S. and Canada, that competition lowers retail prices and that small carriers are especially effective in this dynamic (for example Chipty 2019). Recent data from the CRTC show that mobile prices have steadily declined across all market segments since Shaw entered the market in 2016 (CRTC 2020). This is precisely why the Big 3 are so insistent on this issue. The Big 3 are harmed by the strong competition from regional carriers.

References

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